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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,135	05/30/2000	Norio Saitoh	192292US2	1267
22850	7590	03/24/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			PARK, CHAN S	
			ART UNIT	PAPER NUMBER
			2622	

DATE MAILED: 03/24/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/579,135

Applicant(s)

SAITOH, NORIO

Examiner

CHAN S PARK

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 1/7/04, and has been entered and made of record. Currently, **claims 1-22** are pending.

Response to Arguments

2. Applicant's arguments filed 1/7/04 have been fully considered but they are not persuasive.

In response to Applicant's arguments regarding the rejection of claims 1-3, 6-8, and 11-13, wherein on pages 10-11, the Applicant explains how the currently amended claims differ from the teachings of Amano. Particularly, the Applicant states that the current invention has, for example, a printer driver adding information for a drawing object to identify the type of drawing object to the print data and the use of area fill information indicating the presence and absence of such area fill and the similar printer driver. The Examiner agrees with the Applicant, in that the use of area fill information indicating the presence and absence of such area fill is not taught by the Amano invention. However, the above limitation, which was included in the Applicant's original claims 4, 9, and 14 dated 5/30/00, was previously rejected under 35 U.S.C. 103(a) as being unpatentable over Amano as applied in claims 1, 6, and 11, and further in view of Garcia et al (hereinafter Garcia) in the Office Action dated 10/7/03. According to the Garcia reference, it discloses a dither printing system comprising a printer driver 31 that refines graphic data, and a printer controller 40 that receives dither data and controls

Art Unit: 2622

the print engine accordingly (col. 43, line 63 - col. 44, line 19 & fig. 44). The reference also discloses the method of adding or indicating the presence or absence of area fill in a graphic image (col. 25, line 66) and the method of changing the dither method depending on what type of image is to be printed (col. 25, line 22 - col. 26, line 23).

In response to the argument in the last paragraph of page 10, the Applicant argues that Amano fails to suggest of a reason to separate two different analyses, one analysis of the printer status and another analysis of the parameter of print information. However, the Examiner believes that the applicant is arguing about something that is not disclosed in the amended claims since the claims do not cite that the invention must not analyze the status of the printer. Also, referring to col. 14, lines 50-54, the Office reads that as long as it requires one of the two analyses to change the dither matrix, the program selects an optimum dither matrix and perform the printing process accordingly. Additionally, Amano teaches the method of selecting dither matrix **based only** on the parameter of print information (fig. 7 & col. 14, line 50 – col. 15, line 50).

Furthermore, Amano clearly teaches that the parameter of print information is used to identify the type of drawing object and is added by the printer driver in the host computer (col. 14, lines 30-34 & col. 15, lines 14-19).

3. Therefore, the rejection of claims 4, 9, and 14, as cited in the Office Action dated 10/7/03, under 35 U.S.C. 103(a) as being unpatentable over Amano as applied in claims 1, 6, and 11, and further in view of Garcia is maintained to reject currently amended claims 1, 6, and 11 in this Office Action.

4. The rejections of claims 2-5, 7-10, and 12-15 are maintained since amended claims 1, 6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amano and further in view of Garcia.
5. The newly added claims 16-22 are rejected under the same reasons noted above since they disclose the same limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-9, 11-14, and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amano in view of Garcia.

6. With respect to claim 1, the Amano et al. reference discloses a printer system (printer 1000 in fig. 1) which inputs drawing data (documents) created or edited by an application on a host computer (col. 11, line 64 – col. 12, line 4), converts the drawing data to a printer language to create print data (col. 15, lines 16-19), and also outputs the image drawn based on the print data from a printer (col. 12, lines 33-36), said printer system comprising:

A printer driver (CPU 1 in conjunction with ROM 3b) which adds information for a drawing object to identify the type of drawing object to the print data (col. 14, lines 30-34 & col. 15, lines 20-23); and

A printer control unit (CPU 12 in conjunction with ROM 13) which selects dither data based on the information for a drawing object based on the information for a drawing object, and executes a dither method based on the selected dither data to form the image drawn (col. 14, lines 34-49).

Amano, however, does not disclose expressly the printer driver that adds area fill information when the drawing object is graphic data and the printer control unit that selects and executes dither data with area fill based on information for a drawing object of the print data.

Garcia, on the other hand, discloses a dither printing system comprising a printer driver 31 that refines graphic data, and a printer controller 40 that receives dither data and controls the print engine accordingly (col. 43, line 63 - col. 44, line 19 & fig. 44). The reference also discloses the method of adding or indicating the presence or absence of area fill in a graphic image added or specified in the printer driver 31 (col. 25, line 66) and the method of changing the dither method depending on what type of image is to be printed by the printer controller (col. 25, line 22 - col. 26, line 23).

Amano and Garcia are analogous art because they are from same field of endeavor, which is the printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of indicating the presence of area fill in a graphic image taught by Garcia with the printing system that selects dither data appropriate for a drawing object based on the information for a drawing object added to the print data taught by Amano.

The motivation for doing so would have been to apply the dither method to high-density or area fill areas.

Therefore, it would have been obvious to combine Amano with Garcia to obtain the invention as specified in claim 1.

7. With respect to claim 2, the Amano reference further discloses a printer control unit comprising:

An object determination unit that determines a drawing object of the print data based on the information for a drawing object (col. 14, lines 34-37);

A dither data output unit which selects dither data matching the drawing object determined by said object determination unit to output the data (col. 14, lines 44-49);
and

A drawing processing unit, which executes a dither method on the print data, using the dither data output from said dither data output unit to expand the data to an image (col. 14, line 52 – col. 15, line 9).

8. With respect to claim 3, the Amano reference further discloses the drawing object that includes at least one of character data, and photograph data, in addition to graphics data (col. 15, lines 45-50).

9. With respect to claim 4, the Garcia reference discloses the printer system, wherein when the area fill information added to the print data indicates the drawing object is graphics data with no area fill, said printer control unit selects dither data appropriate for the graphics data with no area fill (col. 25, line 38 – col. 26, line 23).
Since the reference teaches the method of detecting the presence of the area fill

information, it is inherent when no area fill is added by the host computer, the printer detects the information and selects appropriate dither data for the graphic data with no area fill.

10. With respect to claim 6, arguments analogous to those presented for claims 1 and 2, are applicable.

11. With respect to claim 7, arguments analogous to those presented for claims 1 and 2, are applicable.

12. With respect to claim 8, arguments analogous to those presented for claim 3, are applicable.

13. With respect to claim 9, arguments analogous to those presented for claim 4, are applicable.

14. With respect to claim 11, arguments analogous to those presented for claims 1 and 2, are applicable. Also see col. 12, lines 5-10 of Amano.

15. With respect to claim 12, arguments analogous to those presented for claims 1 and 2, are applicable.

16. With respect to claim 13, arguments analogous to those presented for claim 3, are applicable.

17. With respect to claim 14, arguments analogous to those presented for claim 4, are applicable.

18. With respect to claim 16, the Amano reference discloses a printer, which inputs drawing data, converts the drawing data to a printer language to create print data (col.

15, lines 10-13), and also outputs the image drawn based on the print data (col. 15, lines 13-15).

Amano, however, does not disclose expressly the printer driver that adds area fill information when the drawing object is graphic data.

Garcia, on the other hand, discloses a dither printing system comprising a printer driver 31 that refines graphic data, and a printer controller 40 that receives dither data and controls the print engine accordingly (col. 43, line 63 - col. 44, line 19 & fig. 44). The reference also discloses the method of adding or indicating the presence or absence of area fill in a graphic image added or specified in the printer driver 31 (col. 25, line 66) and the method of changing the dither method depending on what type of image is to be printed by the printer controller (col. 25, line 22 - col. 26, line 23).

Amano and Garcia are analogous art because they are from same field of endeavor, which is the printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of indicating the presence of area fill in a graphic image taught by Garcia with the printing system that selects dither data appropriate for a drawing object based on the information for a drawing object added to the print data taught by Amano.

The motivation for doing so would have been to apply the dither method to high-density or area fill areas.

Therefore, it would have been obvious to combine Amano with Garcia to obtain the invention as specified in claim 1.

Art Unit: 2622

19. With respect to claim 17, arguments analogous to those presented for claims 1 and 3, are applicable.

20. With respect to claim 18, arguments analogous to those presented for claims 1 and 4, are applicable.

21. With respect to claim 19, the Amano reference discloses a printer, which inputs drawing data, converts the drawing data to a printer language to create print data (col. 15, lines 10-13), and also outputs the image drawn based on the print data (col. 15, lines 13-15), said printer comprising:

A printer control unit which selects dither data based on the information for a drawing object based on the information for a drawing object, and executes a dither method based on the selected dither data to form the image drawn (col. 14, lines 34-49).

Amano, however, does not disclose expressly the printer control unit which selects and executes dither data with area fill based on information for a drawing object of the print data.

Garcia, on the other hand, discloses a dither printing system comprising a printer driver 31 that refines graphic data, and a printer controller 40 that receives dither data and controls the print engine accordingly (col. 43, line 63 - col. 44, line 19 & fig. 44). The reference also discloses the method of adding or indicating the presence or absence of area fill in a graphic image added or specified in the printer driver 31 (col. 25, line 66) and the method of changing the dither method depending on what type of image is to be printed by the printer controller (col. 25, line 22 - col. 26, line 23).

Amano and Garcia are analogous art because they are from same field of endeavor, which is the printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of indicating the presence of area fill in a graphic image taught by Garcia with the printing system that selects dither data appropriate for a drawing object based on the information for a drawing object added to the print data taught by Amano.

The motivation for doing so would have been to apply the dither method to high-density or area fill areas.

22. With respect to claim 20, arguments analogous to those presented for claims 1 and 2, are applicable.

23. With respect to claim 21, arguments analogous to those presented for claims 1 and 3, are applicable.

24. With respect to claim 22, arguments analogous to those presented for claims 1 and 4, are applicable.

Claims 5, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Amano and Garcia as applied to claims 1, 6, and 11 above, and further in view of Nakajima U.S. Patent No. 6,266,152.

25. With respect to claim 5, the combination of Amano and Garcia discloses all the limitations of claim 1 but it does not teach if the drawing data can be CAD data created by a CAD application.

The Nakajima reference, however, discloses a printing system comprising a print driver (driver 20) for selecting appropriate color matching methods for natural, graphic, and text image (col. 8, table 1), and a print controller (controller 70) that performs dither process on the basis of drawing command (col. 6, lines 58-65). The reference further teaches that the drawing data can be CAD data to perform accordingly (col. 8, lines 31-41).

Amano, Garcia, and Nakajima are analogous art because they are from same field of endeavor that is the printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of applying CAD data to the printing system taught by Nakajima with the printing system that selects dither data appropriate for a drawing object based on the information for a drawing object added to the print data taught by Amano et al.

The motivation for doing so would have been to apply correct dither correction method to the CAD data created by a CAD application and to prevent the possibility of erasing the black thin lines in the mapping process.

Therefore, it would have been obvious to combine Amano et al. with Nakajima to obtain the invention as specified in claim 5.

26. With respect to claim 10, arguments analogous to those presented for claim 5, are applicable.

27. With respect to claim 15, arguments analogous to those presented for claim 5, are applicable.

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S PARK whose telephone number is (703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park
Examiner
Art Unit 2622

csp
March 9, 2004


EDWARD COLES
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 2600